

NORFOLK COUNTY RETIREMENT SYSTEM

FINANCIAL STATEMENTS

YEARS ENDED DECEMBER 31, 2018 AND 2017

NORFOLK COUNTY RETIREMENT SYSTEM

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INDEPENDENT AUDITOR'S REPORT

To the Board of the Norfolk County
Retirement System
Canton, Massachusetts

Report on Financial Statements

We have audited the accompanying financial statements of Norfolk County Retirement System (the System), which comprise the statements of fiduciary net position as of December 31, 2018 and 2017 and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of Norfolk County Retirement System as of December 31, 2018 and 2017, and the changes in fiduciary net position for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 7 and the supplementary Schedule of Changes in Net Pension Liability and Related Ratios, Investment Return, and Contributions, and the notes to the required supplementary information on pages 28 through 31 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated September 25, 2019 on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.

DI PESA & COMPANY

Di Pesa & Company

Certified Public Accountants
Quincy, Massachusetts
September 25, 2019

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

DECEMBER 31, 2018 AND 2017

The following discussion provides an overview and analysis of the fiduciary net position and changes in fiduciary net position of the Norfolk County Retirement System (the System or Plan) by management for the years ended December 31, 2018 and 2017. Please refer to the audited financial statements when reading this discussion.

Overview of the Financial Statements

The System's financial statements comprise a statements of fiduciary net position, statements of changes in fiduciary net position, notes to the financial statements and required supplementary information.

The Statement of Fiduciary Net Position presents information on the System's assets and liabilities and the resulting net position restricted for pension benefits. This statement reflects the System's investments at fair value, as well as cash, receivables, and other assets and liabilities.

The Statement of Changes in Fiduciary Net Position presents information showing how the System's net position restricted for pension benefits changed during the years ended December 31, 2018 and 2017. It reflects in total the contributions by members and participating employers, along with deductions for retirement benefits, refunds and withdrawals, and administrative expenses. Investment income from investing and securities lending activities is also presented.

The Notes to the Financial Statements are considered an integral part of the financial statements and provide additional information that is essential for the reader to gain a full understanding of the data provided in the financial statements.

The Required Supplementary Information includes management's discussion and analysis, schedules of changes in net pension liability and related ratios, schedule of investment return, schedules of contributions and related notes.

Financial Highlights and Analysis

- The net position restricted for pension benefits is available for payment of monthly retirement benefits and other qualified distributions to the System's participants. Net position restricted for pension benefits was \$912 million at December 31, 2018 compared to \$963 million at December 31, 2017. The decrease in net position of \$51 million resulted primarily from a decrease in the fair value of portfolio investments.

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2018 AND 2017

The following tables present the current and prior year condensed data on the System's financial statements.

Fiduciary Net Position

	<u>2018</u>	<u>2017</u>
Assets		
Cash and cash equivalents	\$ 31,558,005	\$ 24,670,102
Investments	877,189,568	933,437,525
Receivables	<u>5,000,184</u>	<u>6,636,905</u>
Total assets	<u>913,747,757</u>	<u>964,744,532</u>
Liabilities		
Accounts payable	<u>1,899,196</u>	<u>1,665,694</u>
Net Position		
Net position restricted for pensions	<u>\$911,848,561</u>	<u>\$963,078,838</u>

Changes in Fiduciary Net Position

Additions		
Contributions	\$ 102,248,364	\$ 93,361,509
Net investment income	(53,017,332)	125,637,080
Other	<u>3,331,428</u>	<u>3,933,503</u>
Total additions	<u>52,562,460</u>	<u>222,932,092</u>
Deductions		
Benefits paid	99,825,606	93,250,088
Other	<u>3,967,131</u>	<u>2,630,702</u>
Total deductions	<u>103,792,737</u>	<u>95,880,790</u>
Change in net position	(51,230,277)	127,051,302
Net position restricted for pension benefits – beginning of year	<u>963,078,838</u>	<u>836,027,536</u>
Net position restricted for pension benefits – end of year	<u>\$911,848,561</u>	<u>\$963,078,838</u>

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2018 AND 2017

Norfolk County Retirement System 2018 Performance Summary

- The net performance for the Norfolk County Retirement System ("Norfolk") for 2018 was -4.54%. This performance was less than the Primary Investment Policy Benchmarks, which fell -4.16%.
- Domestic Equity managers represented 30.2% of the portfolio as of December 31, 2018. Approximately 62% of the domestic equity assets were allocated to large capitalization equity mandates and the remaining assets were allocated to mid and small capitalization managers. Domestic equities had a 2018 net return of -7.83% and underperformed the Russell 3000 index that returned -5.24%.
- International Equity managers represented 16.9% of the portfolio as of December 31, 2018. Approximately 66% of the international equity assets were allocated to developed markets and the remaining to emerging markets. International equity managers' net return was -15.69%, which trailed the MSCI AC World ex US (NET) benchmark return of -14.20%.
- Domestic Fixed Income Managers represented 22.1% of the portfolio as of December 31, 2018. The overall net return for these managers was -0.10% for the year, which exceeded the return of the Barclays Aggregate Bond Index of -0.62%.
- Real Estate investment managers had a net return of 6.64% in 2018 and represented 9.5% of the total portfolio as of year-end 2018. Norfolk's real estate exposure is comprised of core, value-add and opportunistic investment strategies. The real estate portfolio underperformed the NCREIF Property Index that returned 6.72% in 2018.
- Private Equity had a net return of 4.93% in 2018 and represented 9.7% of the total portfolio as of year-end 2018. Norfolk's private equity portfolio underperformed the State Street Private Equity index, which returned 15.00%.
- Hedge Funds had a net return of -0.86% in 2018, which exceeded the -4.08% return of the HFRI Hedge Fund-of- Funds Composite Index. Hedge funds represented 8.5% of the plan assets as of year-end 2018.
- Real Assets represented 0.4% of the portfolio as of December 31, 2018. Norfolk's real asset investment managers had a net return of 36.08% in 2018, which was ahead of the Real Assets Index benchmark of -13.66%.

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2018 AND 2017

Norfolk County Retirement System 2017 Performance Summary

- The net performance for the Norfolk County Retirement System ("Norfolk") for 2017 was 14.81%. This performance was less than the Primary Investment Policy Benchmarks, which rose 15.11% and was ahead of the Secondary Investment Policy Benchmark, which rose 14.25%.
- Domestic Equity managers represented 31.4% of the portfolio as of December 31, 2017. Over half of the domestic equity assets were allocated to large capitalization equity mandates and the remaining assets were allocated to mid and small capitalization managers. Domestic equities had a 2017 net return of 20.34% and underperformed the Russell 3000 index that returned 21.13%.
- International Equity managers represented 19.2% of the portfolio as of December 31, 2017. Approximately 66% of the international equity assets were allocated to developed markets and the remaining to emerging markets. International equity managers' net return was 30.53%, which exceeded the MSCI AC World ex US (NET) benchmark return of 27.19%.
- Domestic Fixed Income Managers represented 21.1% of the portfolio as of December 31, 2017. The overall net return for these managers was 5.81% for the year, which exceeded the return of the Barclays Aggregate Bond Index of 3.54%.
- Real estate investment managers had a net return of 9.05% in 2017 and represented 9.0% of the total portfolio as of year-end 2017. Norfolk's real estate exposure is comprised of core, value-add and opportunistic investment strategies. The real estate portfolio outperformed the NCREIF Property Index that returned 6.96% in 2017.
- Private equity had a net return of 7.67% in 2017 and represented 8.7% of the total portfolio as of year-end 2017. Norfolk's private equity exposure underperformed the State Street Private Equity Index, which returned 15.12%.
- Hedge funds had a net return of 8.08% in 2017, which exceeded the 7.73% return of the HFRI Hedge Fund-of-Funds Composite Index. Hedge funds represented 8.0% of the plan assets as of year-end 2017.
- Real Assets represented 0.6% of the portfolio as of December 31, 2017. Norfolk's Real Asset investment managers had a net return of 17.41% in 2017, which was ahead of the Real Assets Index benchmark of 17.00%.

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) (Continued)

DECEMBER 31, 2018 AND 2017

Other Information

This financial report is designed to provide a general overview of the System's finances. Questions concerning the information provided in this report or requests for additional financial information should be addressed to the Norfolk County Retirement Board, 480 Neponset Street #15, Canton, MA 02021.

NORFOLK COUNTY RETIREMENT SYSTEM

STATEMENTS OF FIDUCIARY NET POSITION

DECEMBER 31, 2018 AND 2017

<u>ASSETS</u>		
	<u>2018</u>	<u>2017</u>
<u>CASH AND CASH EQUIVALENTS</u>	<u>\$ 31,558,005</u>	<u>\$ 24,670,102</u>
<u>INVESTMENTS, AT FAIR VALUE:</u>		
Equities	216,954,416	241,715,065
Fixed Income	88,877,251	68,255,145
Pooled Funds:		
Equity	224,475,660	254,720,777
Fixed Income	111,189,190	132,402,457
Private Equity	72,684,345	71,179,020
Real Estate	88,417,884	88,406,467
Hedge	74,590,822	76,758,594
<u>TOTAL INVESTMENTS, AT FAIR VALUE</u>	<u>877,189,568</u>	<u>933,437,525</u>
<u>RECEIVABLES:</u>		
Member Contributions	1,679,413	2,345,819
Intergovernmental	2,333,257	3,245,516
Interest and Dividend Income Due	812,132	661,487
Receivable for Investments Sold	170,338	374,579
Miscellaneous	5,044	9,504
<u>TOTAL RECEIVABLES</u>	<u>5,000,184</u>	<u>6,636,905</u>
<u>TOTAL ASSETS</u>	<u>913,747,757</u>	<u>964,744,532</u>
 <u>LIABILITIES</u>		
<u>LIABILITIES:</u>		
Accounts Payable	1,316,422	1,081,703
Payable for Investments Purchased	582,774	583,991
<u>TOTAL LIABILITIES</u>	<u>1,899,196</u>	<u>1,665,694</u>
<u>NET POSITION RESTRICTED FOR PENSION BENEFITS</u>	<u>\$ 911,848,561</u>	<u>\$ 963,078,838</u>

The accompanying notes are an integral part of these financial statements.

NORFOLK COUNTY RETIREMENT SYSTEM

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

YEARS ENDED DECEMBER 31, 2018 AND 2017

	<u>2018</u>	<u>2017</u>
<u>ADDITIONS:</u>		
Contributions:		
Employer	\$ 69,957,756	\$ 64,009,904
Member	<u>32,290,608</u>	<u>29,351,605</u>
Total Contributions	<u>102,248,364</u>	<u>93,361,509</u>
Investment Income:		
Net Change in Fair Value of Investments	(54,622,430)	124,208,085
Interest and Dividends	<u>8,928,267</u>	<u>8,351,788</u>
Total Investment Income	(45,694,163)	132,559,873
Less Investment Expenses	<u>7,323,169</u>	<u>6,922,793</u>
Net Investment Income	<u>(53,017,332)</u>	<u>125,637,080</u>
Other	<u>3,331,428</u>	<u>3,933,503</u>
<u>TOTAL ADDITIONS</u>	<u>52,562,460</u>	<u>222,932,092</u>
<u>DEDUCTIONS:</u>		
Benefits Paid	99,825,606	93,250,088
Refunds of Contributions	2,752,015	1,415,101
Administrative Expenses	<u>1,215,116</u>	<u>1,215,601</u>
<u>TOTAL DEDUCTIONS</u>	<u>103,792,737</u>	<u>95,880,790</u>
<u>CHANGE IN NET POSITION</u>	(51,230,277)	127,051,302
<u>NET POSITION RESTRICTED FOR PENSION BENEFITS:</u>		
<u>BEGINNING OF YEAR</u>	<u>963,078,838</u>	<u>836,027,536</u>
<u>END OF YEAR</u>	<u>\$ 911,848,561</u>	<u>\$ 963,078,838</u>

The accompanying notes are an integral part of these financial statements.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 1 – PLAN DESCRIPTION

The Norfolk County Retirement System (the System or the Plan) is a cost-sharing multiple-employer contributory defined benefit governmental pension plan established under Chapter 32 of the Massachusetts General Laws ("MGL") covering all employees of governmental member units deemed eligible by the Norfolk County Retirement Board (the Board), with the exception of school department employees who serve in a teaching capacity. The pensions of such school employees are administered by the Commonwealth of Massachusetts' Teachers Retirement System. Membership in the Plan is mandatory immediately upon the commencement of employment for all non-teaching permanent, full time employees.

The System is governed by a five member Board who establish the policies under which the System operates. Board members also approve all of the System's financial transactions, including the approval of retirement benefits to members.

The day-to-day operations of the System are managed by the Executive Director. The legislative body for the System is an Advisory Council consisting of full-time treasurers or other qualified officials of the member units. The Advisory Council meets at least twice annually and is responsible for supervising and certifying the procedures involved in the election of members to the retirement board.

As of December 31, 2018 and 2017, the Plan's membership consisted of:

	<u>2018</u>	<u>2017</u>
Retirees and beneficiaries	3,411	3,336
Active participants	5,351	5,446
Inactive with a vested right to benefits or to receive refund of their contributions	3,301	2,992

The number of participating employers was 41 for both 2018 and 2017.

The System is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of MGL. The Public Employee Retirement Administration Commission (PERAC) is the state agency responsible for oversight of the Commonwealth's public retirement systems.

Massachusetts Contributory Retirement System benefits are, with certain exceptions, uniform from system to system. The System provides for retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For persons who became members on or after April 2, 2012, average salary is the average annual rate of regular compensation received during the five consecutive years that produce the highest average, or, if greater, during the last five years (whether or not consecutive) preceding retirement. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 1 – PLAN DESCRIPTION (Continued)

There are three classes of membership in the retirement system: group 1, group 2, and group 4. Group 1 consists of general employees which includes clerical and administrative positions. Group 2 consists of positions that have been specified as hazardous. Lastly, group 4 consists of police officers, firefighters, and other hazardous positions.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of 20 years of service or upon reaching the age of 55 with 10 years of service if hired after 1978 and if classified in groups 1 or 2. A person who became a member on or after April 2, 2012 is eligible for a superannuation retirement allowance upon reaching the age of 60 with 10 years of service if in group 1, 55 years of age with 10 years of service if in group 2, and 55 years of age if hired prior to 1978 or if classified in group 4. Normal retirement for most employees occurs at age 65 (except for certain hazardous duty and public safety positions, whose normal retirement is at age 55).

A retirement allowance consists of two parts: an annuity and a pension. A member's accumulated total deductions and the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension. The average retirement benefit is approximately 80-85% pension and 15-20% annuity.

Active members contribute between 5 and 9% of their gross regular compensation. Members joining the System after January 1, 1979 must contribute an additional 2% on regular compensation earned at a rate in excess of \$30,000. The percentage rate is keyed to the date upon which an employee's membership commences. These deductions are deposited in the Annuity Savings Fund and earn interest at a rate determined by the Public Employee Retirement Administration Commission's (PERAC) actuary. When a member's retirement becomes effective, his/her deductions and related interest are transferred to the Annuity Reserve Fund. Any cost-of-living adjustments granted between 1981 and 1997 and any increase in other benefits imposed by the Commonwealth of Massachusetts' state law during those years are borne by the Commonwealth and are deposited into the Pension Fund. Cost-of-living adjustments granted after 1997 must be approved by the System and all costs are borne by the System.

The pension portion of any retirement benefit is paid from the Pension Fund of the System. The governmental unit employing the member must annually appropriate and contribute the amount of current-year pension assessment. In past years, retirement systems were paying only the actual retirement benefits that were due each year. Systems had no statutory authorization to put aside money for the future benefits of employees who are currently employed. Large unfunded liabilities resulted from operating under this pay-as-you-go basis. In 1977, legislation authorized local governments to appropriate funds to meet future pension obligations. In 1983, additional legislation was passed requiring the transfer of investment earnings (in excess of the amount credited to member accounts) into the Pension Reserve Fund. These initiatives have significantly reduced the rate of growth of the Retirement System's unfunded liabilities, and in some Systems have actually reduced such liability.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 1 – PLAN DESCRIPTION (Continued)

Administrative expenses, which were previously appropriated from the governmental entities whose employees are members of the system, are now paid from excess investment income.

Members who become permanently and totally disabled for further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent on several factors, including whether or not the disability is work related, the member's age, years of creditable service, level of compensation, veterans' status and group classification.

Employees who resign from service and who are not eligible to receive a retirement allowance or are under the age of 55 are entitled to request a refund of their accumulated total deductions. In addition, with at least ten years of creditable service, such employees are entitled to receive one hundred (100%) percent of the regular interest which has accrued upon those deductions. Survivor benefits are extended to eligible beneficiaries of members whose death occurs prior to or following retirement.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting and Financial Statement Presentation

The financial statements have been prepared using the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting policies are described herein.

Reporting Entity

The System was established to provide retirement benefits to eligible employees of its member employers and their beneficiaries.

Cash and Cash Equivalents

Cash and cash equivalents are considered to cash on hand, demand deposits and short-term investments with an original maturity of three months or less from the date of acquisition.

Investments

Investments are reported at fair value. Fair values of securities held directly are based on quotations from national securities exchanges, except for pooled funds, alternative investments, real estate, and hedge funds, for which fair values are estimated as detailed below.

Pooled Equity and Fixed Income Funds – The fair value of shares in managed investment pools is based on unit values reported by the managers of those respective funds.

Pooled Private Equity Funds – Pooled private equity funds include holdings through equity interests in various limited partnerships. These investments are carried at the limited partnership interest or redemption value, the equivalent of net asset value, which approximates fair value. Values assigned to such investments are based on available information and do not necessarily represent amounts

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Investments (Continued)

that may ultimately be realized in liquidation. Liquidation values depend largely on future circumstances, including marketability, and frequently cannot reasonably be estimated until at, or near, the liquidation date.

Pooled Real Estate Funds – Real estate investments consist of interests in commercial properties held by various partnerships and other limited liability entities, some of which utilize debt financing. Fair values of such holdings are reported based on net asset values of the entities, which are estimated using third-party appraisals and other information provided by the property managers.

Pooled Hedge Funds – The fair value of shares in managed hedge funds is based on unit values reported by the managers of those respective funds.

Investments Sold and Investments Purchased

Receivables for investments sold represent amounts due from brokers for unsettled security sales transactions at year end. Liabilities for investments purchased represent amounts due to brokers for unsettled purchases at year end.

Revenue Recognition

Contributions are recognized as additions in the period when they become due pursuant to formal statutory obligations. Investment income is recognized when earned.

Benefit Payments and Refunds of Contributions

Benefits and refunds to Plan members and beneficiaries are recognized as expenses when due and payable in accordance with the terms of the Plan.

Intergovernmental, Reimbursements and Transfers to Other Systems

When members transfer to or from other Massachusetts public retirement systems, their cumulative contributions are transferred from the prior employer to the respective Massachusetts public retirement system, and are recognized as receipts or expenses when paid.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions during the reporting period. Actual results could differ from estimates. Fair values of real estate, alternative investment and hedge fund holdings are generally estimated absent readily available market values, and such estimates may be materially different from values that would have been used if a ready market existed.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 3 – PLAN ADMINISTRATION

The System is administered by a five-person Board of Retirement. Board members are required to meet at least once a month. The Board must keep a record of all of its proceedings. The Board must annually submit to the appropriate authority an estimate of the expenses of administration and cost of operation of the System. The Board must annually file a financial statement of condition for the System with PERAC.

The Advisory Council consists of the full time treasurers, elected or appointed, for each town, unit or district within the System. The members of the Advisory Council elect the second member of the Board of Retirement as well as a Chair from among its members. The Advisory Council is required by statute to meet twice per year.

The investment of the System's funds is the responsibility of the Board. Disability retirement allowances must be approved by the Board and are then submitted to the PERAC Actuary for verification prior to payment. All expenses incurred by the System must be approved by a majority vote of the Board.

Board members and employees are bonded by an authorized agent representing a company licensed to do business in Massachusetts. The MACRS program for the System provides \$50,000,000 fiduciary protection for Trustees and employees, as well as a \$1,000,000 fidelity policy for crime coverage.

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS

The System's investments are measured and reported at fair value. The fair value hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 – Inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets that can be accessed at the measurement date.
- Level 2 - Inputs other than quoted prices that are observable for an asset or liability either directly or indirectly, including inputs in markets that are not considered to be active.
- Level 3 - Unobservable inputs based on the best information available, using assumptions in determining the fair value of investments.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest to Level 3 inputs.

In certain instances where the determination of the fair value measurement is based on inputs from different levels of the fair value hierarchy, the level in the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

NORFOLK COUNTY RETIREMENT SYSTEM

**NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS (Continued)

Fair value of certain investments that do not have a readily determinable fair value is established using net asset value (or its equivalent) as a practical expedient. These investments are not categorized according to the fair value hierarchy.

The following tables present a summary of the fair value hierarchy of investments and short-term holdings that are measured at fair value on a recurring basis at December 31, 2018 and 2017 (in thousands):

2018

		<u>Fair Value Measurements Using</u>		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<u>Investments by Fair Value Level</u>	<u>Total</u>			
Short-Term Investment Funds	\$ <u>31,162</u>	\$ <u>-</u>	\$ <u>31,162</u>	\$ <u>-</u>
Equities:				
Common Stock	214,857	214,857	-	-
Mutual Funds	696	696	-	-
Real Estate Investment Trusts	<u>1,401</u>	<u>1,401</u>	<u>-</u>	<u>-</u>
Total Equities	<u>216,954</u>	<u>216,954</u>	<u>-</u>	<u>-</u>
Fixed Income:				
Collateralized Mortgage Obligations	19,466	-	19,466	-
Corporate Bonds	36,551	-	36,551	-
Credit Card Receivable	447	-	447	-
Government Issues	22,771	-	22,771	-
Municipals	1,804	-	1,804	-
Other Asset Backed	<u>7,838</u>	<u>-</u>	<u>7,838</u>	<u>-</u>
Total Fixed Income	<u>88,877</u>	<u>-</u>	<u>88,877</u>	<u>-</u>
Pooled Funds:				
Equity	141,865	106,092	35,773	-
Fixed Income	75,926	12,730	62,798	398
Private Equity	2,500	374	-	2,126
Real Estate	56,411	7,366	79	48,966
Hedge	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Pooled Funds	<u>276,702</u>	<u>126,562</u>	<u>98,650</u>	<u>51,490</u>
Total Investments by Fair Value Level	\$ <u>613,695</u>	\$ <u>343,516</u>	\$ <u>218,689</u>	\$ <u>51,490</u>
Investments Measured at Net Asset Value (NAV):				
Pooled Equity Funds	\$ 82,611			
Pooled Fixed Income Funds	35,264			
Pooled Private Equity Funds	70,184			
Pooled Real Estate Funds	32,007			
Pooled Hedge Funds	<u>74,591</u>			
Total Investments Measured at NAV	\$ <u>294,657</u>			
Total Investments Measured at Fair Value	\$ <u>908,352</u>			

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS (Continued)

2017

		<u>Fair Value Measurements Using</u>		
<u>Investments by Fair Value Level</u>	<u>Total</u>	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Short-Term Investment Funds	\$ <u>24,502</u>	\$ -	\$ <u>24,502</u>	\$ -
Equities:				
Common Stock	239,590	239,580	10	-
Mutual Funds	665	665	-	-
Real Estate Investment Trusts	<u>1,460</u>	<u>1,460</u>	-	-
Total Equities	<u>241,715</u>	<u>241,705</u>	<u>10</u>	-
Fixed Income:				
Collateralized Mortgage Obligations	18,348	-	18,348	-
Convertible Bonds	1,544	-	1,544	-
Corporate Bonds	28,816	-	28,816	-
Credit Card Receivable	468	-	468	-
Government Issues	11,284	-	11,284	-
Municipals	1,798	-	1,798	-
Other Asset Backed	<u>5,997</u>	-	<u>5,997</u>	-
Total Fixed Income	<u>68,255</u>	-	<u>68,255</u>	-
Pooled Funds:				
Equity	160,397	125,492	34,905	-
Fixed Income	96,258	1,939	94,054	265
Private Equity	4,883	50	757	4,076
Real Estate	33,339	4,976	61	28,302
Hedge	-	-	-	-
Total Pooled Funds	<u>294,877</u>	<u>132,457</u>	<u>129,777</u>	<u>32,643</u>
Total Investments by Fair Value Level	<u>\$ 629,349</u>	<u>\$ 374,162</u>	<u>\$ 222,544</u>	<u>\$ 32,643</u>
Investments Measured at Net Asset Value (NAV):				
Pooled Equity Funds	\$ 94,324			
Pooled Fixed Income Funds	36,144			
Pooled Private Equity Funds	66,296			
Pooled Real Estate Funds	55,068			
Pooled Hedge Funds	<u>76,759</u>			
Total Investments Measured at NAV	\$ <u>328,591</u>			
Total Investments Measured at Fair Value	<u>\$ 957,940</u>			

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 4 – FAIR VALUE MEASUREMENTS OF INVESTMENTS (Continued)

Reconciliation of Total Investments Measured at Fair Value (listed above) to the Statement of Fiduciary Net Position (in thousands):

	<u>2018</u>	<u>2017</u>
Total Investments Measured at Fair Value per above:	\$908,352	\$957,540
Short-Term Investment Funds classified as Cash and Cash Equivalents on Statement of Fiduciary Net Position	<u>(31,162)</u>	<u>(24,502)</u>
Total Investments on Statement of Fiduciary Net Position	<u>\$877,190</u>	<u>\$933,438</u>

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES

The following disclosures represent essential risk information about the System's deposits and investments.

Custodial Credit Risk – Deposits

Custodial credit risk is the risk that in the event of bank failure, the System's deposits may not be returned. The System carries deposits that are insured by FDIC insurance up to \$250,000 per financial institution. The System evaluates each financial institution and assesses the level of risk of each institution and only uses those institutions with an acceptable level of risk. At December 31, 2018 and 2017, the System had cash balances at two financial institutions in excess of FDIC limits of approximately \$4,029,000 and \$10,522,000, respectively.

Investment Policy

The provisions of M.G.L. Chapter 32 § 23 (2) and the Plan's own investment policy govern the System's investment practice. The Board retains an investment consultant to assure that strategic investment diversification is attained, to employ investment managers with expertise in their respective asset classes, and to closely monitor the implementation and performance of the respective investment strategies. The System invests in stocks (domestic and foreign), fixed income securities (domestic and foreign), private equity, real estate and hedge funds.

Custodial Credit Risk - Investments

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the System would not be able to recover the value of investment or securities. The System's investments are held by the System's custodian and registered in the System's name. All of the System's securities are held by the System's custodial bank in the System's name, except for investments in pooled funds, which by their nature, do not have securities that are used as evidence of the investment.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Interest Rate Risk

The following is a listing of the System's fixed income investments (in thousands) and related maturity schedule (in years) as of December 31, 2018 and 2017:

2018

<u>Investment Type</u>	<u>Fair Value</u>	<u>Less than 1</u>	<u>1 – 5</u>	<u>6 – 10</u>	<u>More than 10</u>
U.S. Agencies	\$ 30,096	\$ -	\$ -	\$ 233	\$29,863
Domestic Corporate	52,099	2,509	13,995	5,889	29,706
International Corporate	4,878	-	3,495	1,383	-
Domestic Government	<u>1,804</u>	<u>-</u>	<u>1,804</u>	<u>-</u>	<u>-</u>
	<u>\$ 88,877</u>	<u>\$ 2,509</u>	<u>\$19,294</u>	<u>\$ 7,505</u>	<u>\$59,569</u>

2017

<u>Investment Type</u>	<u>Fair Value</u>	<u>Less than 1</u>	<u>1 – 5</u>	<u>6 – 10</u>	<u>More than 10</u>
U.S. Agencies	\$ 19,328	\$ 2	\$ 9	\$ 349	\$18,968
Domestic Corporate	45,568	638	17,450	2,536	24,944
International Corporate	1,561	-	1,340	221	-
Domestic Government	<u>1,798</u>	<u>-</u>	<u>1,798</u>	<u>-</u>	<u>-</u>
	<u>\$ 68,255</u>	<u>\$ 640</u>	<u>\$ 20,597</u>	<u>\$ 3,106</u>	<u>\$43,912</u>

The System's guidelines do not specifically address limits on maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. The managers of each fixed income portfolio are responsible for determining the maturity and commensurate returns of their portfolio.

Credit Risk

The System allows investment managers to apply discretion under the Prudent Person rule. Investments are made, as a prudent person would be expected to act with discretion and intelligence, to seek reasonable income, preserve capital and, in general, avoid speculative investments.

The System's fixed income investments as of December 31, 2018 and 2017 were rated by Standard & Poor's and/or an equivalent national rating organization and the ratings are presented below (in thousands) using the Standard & Poor's rating scale:

NORFOLK COUNTY RETIREMENT SYSTEM

**NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Credit Risk (Continued)

2018

Investment Type	Fair Value	AAA	AA	A	BBB	BB	B	CC to D	Not Rated
U.S. Agencies	\$ 30,096	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,096
Domestic									
Corporate	52,099	4,206	860	3,236	24,654	5,765	238	905	12,235
International									
Corporate	4,878	-	-	369	4,036	473	-	-	-
Domestic									
Government	1,804	-	1,164	-	640	-	-	-	-
Pooled Funds	111,189	-	-	-	-	-	-	-	111,189
	<u>\$200,066</u>	<u>\$ 4,206</u>	<u>\$ 2,024</u>	<u>\$ 3,605</u>	<u>\$ 29,330</u>	<u>\$ 6,238</u>	<u>\$ 238</u>	<u>\$ 905</u>	<u>\$153,520</u>

2017

Investment Type	Fair Value	AAA	AA	A	BBB	BB	B	CC to D	Not Rated
U.S. Agencies	\$ 19,328	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 19,328
Domestic									
Corporate	45,568	1,649	1,636	4,415	21,766	6,532	348	1,901	7,321
International									
Corporate	1,561	-	-	221	1,340	-	-	-	-
Domestic									
Government	1,798	-	1,140	-	658	-	-	-	-
Pooled Funds	132,402	-	-	-	-	-	-	-	132,402
	<u>\$200,657</u>	<u>\$ 1,649</u>	<u>\$ 2,776</u>	<u>\$ 4,636</u>	<u>\$ 23,764</u>	<u>\$ 6,532</u>	<u>\$ 348</u>	<u>\$ 1,901</u>	<u>\$159,051</u>

Concentration Risk

Other than investments in four and three pooled funds, respectively, the System has no individual investment at fair value that exceeds 5% of total investments at December 31, 2018 and 2017. The System adheres to the provisions of MGL Chapter 32 § 23, the rules and regulations of PERAC, and the Plan's own investment policy when managing concentration risk.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Similar to the investments in domestic equities, the System employs or encourages its investment advisor to employ diversification, asset allocation, and quality strategies. Risk of loss arises from changes in currency exchange rates. The System's exposure to foreign currency risk as of December 31, 2018 and 2017 is presented on the following tables (in thousands):

<u>2018</u>					
<u>Currency</u>	<u>Cash and Cash Equivalents</u>	<u>Equity</u>	<u>Fixed Income</u>	<u>Pooled Funds</u>	<u>Total</u>
Argentine Peso	\$ -	\$ -	\$ -	\$ 810	\$ 810
Australian Dollar	-	469	-	2,912	3,381
Bermudian Dollar	-	-	-	408	408
Brazilian Real	-	-	-	4,235	4,235
British Pound Sterling	8	11,183	-	5,843	17,034
Canadian Dollar	-	1,528	-	111	1,639
Cayman Islands Dollar	-	-	-	420	420
Chinese Yuan Renminbi	-	-	-	10,278	10,278
Danish Kroner	-	1,747	-	6	1,753
Egyptian Pound	-	-	-	516	516
Euro Currency	-	29,890	-	15,835	45,725
Hong Kong Dollar	-	2,182	-	-	2,182
Hungarian Forint	-	-	-	878	878
Indian Rupee	-	-	-	4,494	4,494
Indonesian Rupiah	-	-	-	2,376	2,376
Japanese Yen	-	9,324	-	12,972	22,296
Malaysian Ringgit	-	-	-	310	310
Mexican Peso	-	-	-	1,870	1,870
New Russian Ruble	-	-	-	5,320	5,320
Norwegian Krone	-	-	-	546	546
Pakistani Rupee	-	-	-	775	775
Philippine Peso	-	-	-	310	310
Singapore Dollar	-	1,118	-	-	1,118
South African Rand	-	-	-	5,142	5,142
South Korean Won	-	-	-	8,297	8,297
Swedish Krona	-	576	-	1,149	1,725

NORFOLK COUNTY RETIREMENT SYSTEM

**NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Foreign Currency Risk (Continued)

2018 (Continued)

<u>Currency</u>	<u>Cash and Cash Equivalents</u>	<u>Equity</u>	<u>Fixed Income</u>	<u>Pooled Funds</u>	<u>Total</u>
Swiss Franc	-	10,431	-	540	10,971
Thai Baht	-	-	-	775	775
Taiwan New Dollar	-	-	-	2,738	2,738
Turkish Lira	-	-	-	2,117	2,117
Total Securities Subject to Foreign Currency Risk	\$ <u>8</u>	\$ <u>68,448</u>	\$ <u>-</u>	\$ <u>91,983</u>	\$ <u>160,439</u>

2017

<u>Currency</u>	<u>Cash and Cash Equivalents</u>	<u>Equity</u>	<u>Fixed Income</u>	<u>Pooled Funds</u>	<u>Total</u>
Argentine Peso	\$ -	\$ -	\$ -	\$ 1,487	\$ 1,487
Australian Dollar	-	335	-	3,053	3,388
Bermudian Dollar	-	-	-	298	298
Brazilian Real	-	-	-	6,871	6,871
British Pound Sterling	-	11,423	-	7,075	18,498
Canadian Dollar	5	2,238	-	157	2,400
Cayman Islands Dollar	-	-	-	497	497
Chinese Yuan Renminbi	-	-	-	9,860	9,860
Columbian Peso	-	-	-	458	458
Danish Kroner	-	1,998	-	5	2,003
Egyptian Pound	-	-	-	562	562
Euro Currency	-	34,122	-	18,973	53,095
Hong Kong Dollar	-	2,275	-	-	2,275
Hungarian Forint	-	-	-	1,311	1,311
Indian Rupee	-	-	-	6,062	6,062
Indonesian Rupiah	-	-	-	3,495	3,495
Japanese Yen	-	11,214	-	17,959	29,183
Malaysian Ringgit	-	-	-	437	437
Mexican Peso	-	-	-	2,939	2,939
New Russian Ruble	-	-	-	4,618	4,618
Norwegian Krone	-	-	-	484	484
Pakistani Rupee	-	-	-	1,061	1,061

NORFOLK COUNTY RETIREMENT SYSTEM

**NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 5 – DEPOSIT AND INVESTMENT RISK DISCLOSURES (Continued)

Foreign Currency Risk (Continued)

	<u>2017</u> (Continued)				
<u>Currency</u>	<u>Cash and Cash Equivalents</u>	<u>Equity</u>	<u>Fixed Income</u>	<u>Pooled Funds</u>	<u>Total</u>
Philippine Peso		-	-	562	562
Singapore Dollar	-	1,465	-	-	1,465
South African Rand	-	-	-	5,747	5,747
South Korean Won	-	-	-	10,163	10,163
Swedish Krona	-	534	-	535	1,069
Swiss Franc	-	10,895	-	1,250	12,145
Thai Baht	-	-	-	874	874
Taiwan New Dollar	-	-	-	3,825	3,825
Turkish Lira	-	-	-	<u>3,307</u>	<u>3,307</u>
Total Securities Subject to					
Foreign Currency Risk	<u>\$ 5</u>	<u>\$76,499</u>	<u>\$ -</u>	<u>\$113,935</u>	<u>\$190,439</u>

NOTE 6 – LEGALLY REQUIRED RESERVES

The System's legally required reserves are all funded at levels required by state statute and were as follows as of December 31:

	<u>2018</u>	<u>2017</u>
Annuity Savings Fund	\$286,911,086	\$277,694,514
Annuity Reserve Fund	77,781,147	74,057,733
Military Service Fund	37,915	37,878
Pension Fund	3,613,574	6,480,675
Pension Reserve Fund	543,504,839	604,808,038
Expense Fund	-	-
	<u>\$911,848,561</u>	<u>\$963,078,838</u>

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 6 – LEGALLY REQUIRED RESERVES (Continued)

The *Annuity Savings Fund* is the fund in which member's contributions are deposited. Voluntary contributions, redeposits, and transfers to and from other systems are also accounted for in this fund. Members' contributions to the fund earn interest at a rate determined by PERAC. Interest for some members who withdraw from the System with less than 10 years of service is transferred to the Pension Reserve Fund. Upon retirement, a member's contributions and interest are transferred to the Annuity Reserve Fund. Dormant account balances must be transferred to the Pension Reserve Fund after a period of 10 years of inactivity.

The *Annuity Reserve Fund* is the fund to which a member's account is transferred upon retirement from the Annuity Savings Fund and the Military Service Fund. The annuity portion of the retirement allowance is paid from this fund. Interest is credited monthly to this fund at the rate of 3% annually on the previous month's balance.

The *Military Service Fund* contains contributions and interest for members while on military leave for service in the Armed Forces who will receive creditable service for the period of that leave. Creditable service is granted provided the member returns to the same governmental unit within two years of the date of discharge from the military. Upon retirement, a member's contributions and interest are transferred to the Annuity Reserve Fund.

The *Pension Fund* contains the amounts appropriated by the governmental units as established by PERAC to pay the pension portion of each retirement allowance.

The *Pension Reserve Fund* contains the amounts set aside by the system for the purpose of establishing a reserve to meet future pension liabilities. Any investment income in excess of the amount required to credit interest to the Annuity Savings Fund, Annuity Reserve Fund and Military Service Fund is credited to the Pension Reserve Fund. Any profit or loss realized on the sale or maturity of any investment or on the unrealized gain or loss of market valued investments as of the valuation date is credited to the Pension Reserve Fund.

The *Expense Fund* contains amounts transferred from investment income for the purpose of administering the System.

The *Investment Income Account* is credited with all interest and dividends derived from invested funds. At the end of the year, the interest credited to the Annuity Savings Fund, Annuity Reserve Fund, Special Military Credit Service Fund and Expense Fund is distributed from this account and the remaining balance is transferred to the Pension Reserve Fund.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 7 – FUNDING POLICY

Participating employers are required to pay into the System their share of the remaining actuarially determined contribution and plan administration costs, which are apportioned among the participating employers based on an actuarial computation.

The participating employers' budgeted contributions to the System for the employer fiscal years ended June 30, 2019 and 2018 were as follows (in thousands):

	<u>2019</u>	<u>2018</u>
Town of Avon	\$ 1,318	\$ 1,204
Avon Housing Authority	23	21
Town of Bellingham	3,184	2,909
Bellingham Housing Authority	30	28
Town of Canton	5,347	4,889
Canton Housing Authority	102	94
Town of Cohasset	2,561	2,341
Cohasset Housing Authority	17	15
Norfolk County	3,623	3,387
Charles River Pollution Control	165	151
Town of Dover	1,351	1,234
Dover-Sherborn Regional High School	794	725
Town of Foxboro	4,473	4,089
Foxboro Housing Authority	59	54
Town of Franklin	5,324	4,863
Franklin Housing Authority	89	81
Town of Holbrook	2,111	1,930
Holbrook Housing Authority	51	47
King Philip Regional School District	783	715
Town of Medfield	2,578	2,354
Medfield Housing Authority	16	14
Town of Medway	2,500	2,282
Medway Housing Authority	93	85
Town of Millis	1,761	1,608
Millis Housing Authority	39	36
Town of Norfolk	2,163	1,979
Norfolk Housing Authority	32	29
Norfolk Mosquito Control	202	184
Town of Plainville	1,892	1,730
Town of Randolph	5,780	5,288
Randolph Housing Authority	67	61

NORFOLK COUNTY RETIREMENT SYSTEM

**NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2018 AND 2017**

NOTE 7 – FUNDING POLICY (Continued)

Town of Sharon	4,188	3,824
Sharon Housing Authority	26	23
Town of Stoughton	5,504	5,030
Stoughton Housing Authority	74	68
Town of Walpole	5,073	4,638
Walpole Housing Authority	56	52
Town of Westwood	5,164	4,720
Town of Wrentham	1,981	1,809
Wrentham Housing Authority	26	24
Dedham Westwood Water District	607	555
	<u>\$71,227</u>	<u>\$65,170</u>

NOTE 8 – NET PENSION LIABILITY

The components of the net pension liability of the System as of December 31, 2018 and 2017, are as follows:

	<u>2018</u>	<u>2017</u>
Total Pension Liability	\$1,562,788,951	\$1,516,083,187
Fiduciary Net Position	<u>911,848,561</u>	<u>963,078,838</u>
System's Net Pension Liability	\$ <u>650,940,390</u>	\$ <u>553,004,349</u>

Fiduciary Net Position as a percentage of total pension liability	58.3%	63.5%
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Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of January 1, 2018. The following actuarial assumptions were applied to all periods included in the measurement:

Actuarial cost method:	Entry Age Normal Cost Method
Amortization method	Open-Level percent of payroll
Asset valuation method	Market value
Investment rate of return	7.75%
Projected salary increases	3.5% - 5.5%
Inflation	4.0%
Cost of living increases	3.0% of first \$17,000
Mortality:	The RP-2014 Blue Collar Mortality Table with Scale with MP-2014

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 8 – NET PENSION LIABILITY (Continued)

The long term expected rate of return on Plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized as follows:

<u>Asset Class</u>	<u>Target Allocation 2018 & 2017</u>	<u>Long-term Expected Real Rate of Return</u>	
		<u>2018</u>	<u>2017</u>
Domestic Equity	32.0%	8.1%	8.8%
International Equities	17.5	8.2%	8.8%
Fixed Income	19.0	3.2%	3.6%
Real Estate	9.0	7.3%	7.4%
Private Equity	8.5	10.4%	13.3%
Hedge Funds	9.0	7.4%	7.4%
Real Assets	<u>5.0</u>	10.4%	10.4%
Total	<u>100.0%</u>		

The annual money-weighted rate of return on investments, net of investment expense was -4.54% and 14.81%% for the years ended December 31, 2018 and 2017, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. The above was the Board's adopted asset allocation policy and best estimates of real rates of return for each major asset class as of December 31, 2018 and 2017.

Discount Rate

The discount rate used to measure the total pension liability as of December 31, 2018 and 2017 was 7.75%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at contractually required rates, actuarially determined. Under Chapter 32 of the MGL, employers are required to make the necessary contributions such that the Plan reaches full funding status by 2040. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine total pension liability.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the System as of December 31, 2018 and 2017. For 2018 and 2017, the net pension liability was calculated using the discount rate of 7.75%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (6.75%) or one-percentage point higher (8.75%) than the current rate.

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO FINANCIAL STATEMENTS DECEMBER 31, 2018 AND 2017

NOTE 8 – NET PENSION LIABILITY (Continued)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate (Continued)

	<u>2018</u>		
	<u>1% Decrease (6.75%)</u>	<u>Current Discount Rate (7.75%)</u>	<u>1% Increase (8.75%)</u>
System's Net Pension Liability	\$816,336,350	\$650,940,390	\$510,329,389

	<u>2017</u>		
	<u>1% Decrease (6.75%)</u>	<u>Current Discount Rate (7.75%)</u>	<u>1% Increase (8.75%)</u>
System's Net Pension Liability	\$715,642,268	\$553,004,349	\$414,842,339

NOTE 9 – LEASE COMMITMENTS

The System leases office space under an operating through August 2021. The lease also provides for the payment of common area costs, real estate taxes and utilities. Future minimum lease payments under the lease is as follows:

<u>Year</u>	<u>Amount</u>
2019	\$ 48,000
2020	48,000
2021	<u>32,000</u>
Total	<u>\$128,000</u>

Rent expense for the years ended December 31, 2018 and 2017 was \$60,602 and \$57,194, respectively.

NOTE 10 – UNCERTAINTIES

The System is, from time to time, involved in legal matters arising in the normal course of its administration of member benefits that, in the opinion of management, will not have a material effect on the net assets of the System.

NOTE 11 – SUBSEQUENT EVENTS

The System has performed an evaluation of subsequent events through September 25, 2019, the date the basic financial statements were available to be issued. No material events were identified by the System.

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULES OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

YEARS ENDED DECEMBER 31, 2014 - 2018

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
<u>TOTAL PENSION LIABILITY:</u>					
Service Cost	\$ 33,120,792	\$ 34,738,004	\$ 33,401,927	\$ 31,963,567	\$ 31,799,628
Interest on Liability and Service Cost	116,162,593	107,709,293	103,990,120	106,603,992	102,271,303
Difference Between Actual and Expected Experience	-	61,837,812	-	13,828,826	-
Assumption Changes	-	36,207,214	-	(57,518,820)	-
Change in Plan Provisions	-	12,205,895	-	-	-
Benefit Payments, Including Refunds of Contributions	<u>(102,577,621)</u>	<u>(94,665,189)</u>	<u>(89,903,327)</u>	<u>(84,888,359)</u>	<u>(81,095,471)</u>
<u>NET CHANGE IN TOTAL PENSION LIABILITY</u>	46,705,764	158,033,029	47,488,720	9,989,206	52,975,460
<u>TOTAL PENSION LIABILITY - BEGINNING OF YEAR</u>	<u>1,516,083,187</u>	<u>1,358,050,158</u>	<u>1,310,561,438</u>	<u>1,300,572,232</u>	<u>1,247,596,772</u>
<u>TOTAL PENSION LIABILITY - END OF YEAR (a)</u>	<u>\$ 1,562,788,951</u>	<u>\$ 1,516,083,187</u>	<u>\$ 1,358,050,158</u>	<u>\$ 1,310,561,438</u>	<u>\$ 1,300,572,232</u>
<u>CHANGE IN FIDUCIARY NET POSITION</u>					
Contributions - Employer	69,957,756	\$ 64,009,904	\$ 58,539,478	\$ 53,201,068	\$ 48,383,549
Contributions - Member	32,290,608	29,351,605	29,448,483	26,920,012	26,322,747
Net Investment Income	(53,017,332)	125,637,080	68,848,066	(11,383,452)	34,539,916
Benefit Payments, Including Refunds of Contributions	(102,577,621)	(94,665,189)	(89,903,327)	(84,888,359)	(81,095,471)
Administrative Expenses	(1,215,116)	(1,215,601)	(1,193,583)	(1,158,971)	(1,077,892)
Other	<u>3,331,428</u>	<u>3,933,503</u>	<u>2,939,696</u>	<u>2,711,397</u>	<u>2,021,260</u>
<u>NET CHANGE IN FIDUCIARY NET POSITION</u>	(51,230,277)	127,051,302	68,678,813	(14,598,305)	29,094,109
<u>FIDUCIARY NET POSITION - BEGINNING OF YEAR</u>	<u>963,078,838</u>	<u>836,027,536</u>	<u>767,348,723</u>	<u>781,947,028</u>	<u>752,852,919</u>
<u>FIDUCIARY NET POSITION - END OF YEAR (b)</u>	<u>\$ 911,848,561</u>	<u>\$ 963,078,838</u>	<u>\$ 836,027,536</u>	<u>\$ 767,348,723</u>	<u>\$ 781,947,028</u>
<u>NET PENSION LIABILITY - END OF YEAR (a) - (b)</u>	<u>\$ 650,940,390</u>	<u>\$ 553,004,349</u>	<u>\$ 522,022,622</u>	<u>\$ 543,212,715</u>	<u>\$ 518,625,204</u>
<u>FIDUCIARY NET POSITION as a PERCENTAGE OF TOTAL PENSION LIABILITY</u>	58.3%	63.5%	61.6%	58.6%	60.1%
<u>COVERED EMPLOYEE PAYROLL</u>	\$ 299,245,268	\$ 289,125,863	\$ 279,489,744	\$ 267,454,300	\$ 246,722,941
<u>NET PENSION LIABILITY as a PERCENTAGE OF COVERED EMPLOYEE PAYROLL</u>	217.5%	191.3%	186.8%	203.1%	210.2%

This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Accompanying Independent Auditors' Report and Notes to Required Supplementary Information

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF INVESTMENT RETURN

YEARS ENDED DECEMBER 31, 2014 - 2018

Annual Money-Weighted Rate of Return,
Net of Investment Expense:

2018	-4.54%
2017	14.81%
2016	8.59%
2015	-0.75%
2014	5.07%

This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Accompanying Independent Auditors' Report and Notes to Required Supplementary Information

NORFOLK COUNTY RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULES OF CONTRIBUTIONS

YEARS ENDED DECEMBER 31, 2014 - 2018

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Actuarially Determined Contribution	\$ 71,227,000	\$ 65,170,000	\$ 59,628,000	\$ 54,208,000	\$ 49,280,000
Actual Contributions in Relation to Actuarially Determined Contribution	<u>71,227,000</u>	<u>65,170,000</u>	<u>59,628,000</u>	<u>54,208,000</u>	<u>49,280,000</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered-Employee Payroll	\$ 299,245,268	\$ 289,125,863	\$ 279,489,744	\$ 267,454,300	\$ 246,722,941
Contributions as a Percentage of Covered-Employee Payroll	23.8%	22.5%	21.3%	20.3%	20.0%

This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Accompanying Independent Auditors' Report and Notes to Required Supplementary Information

NORFOLK COUNTY RETIREMENT SYSTEM

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

DECEMBER 31, 2018 AND 2017

1. SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

The total pension liability presented in the schedule were provided by the System's actuarial consultant, Sherman Actuarial Services, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the System. The related ratios show Plan net position as a percentage of the total pension liability and the net pension liability as a percentage of covered employee payroll.

2. SCHEDULE OF INVESTMENT RETURN

The annual money-weighted rate of return is calculated as the internal rate of return on Plan investments, net of Plan investment expense. A money-weighted rate of return expresses investment performance, net of Plan investment expense, adjusted for changing amounts actually invested.

3. SCHEDULE OF CONTRIBUTIONS

The actuarially determined contribution amount in the schedule of contributions was calculated as of January 1, 2018 (for 2018 and 2017) and as of January 1, 2016 (for 2016 and 2015) and as of January 1, 2015 for 2014. The following actuarial methods and assumptions were used to determine the contribution amount reported in that schedule:

Actuarial Cost Method	Individual entry age normal actuarial cost method
Amortization Method	Open – Level percent of payroll Payroll assumed to grow 3.5%-5.5% per year (January 1, 2018 and 2016) and 4% per year (January 1, 2015)
Asset Valuation Method	Market value as reported to PERAC
Inflation	4.0% (January 1, 2018 and 2016) 4.5% (January 1, 2015)
Investment Rate of Return	7.75% (January 1, 2018) 8.0% (January 1, 2016) 8.25% (January 1, 2015)
Cost of Living Adjustments	3.0% of first \$17,000 (January 1, 2018) and 3% of first \$15,000 (January 1, 2016 and 2015) of retirement income
Mortality Table	RP-2014 Blue Collar Mortality Table with Scale with MP-2014 (January 1, 2018 and 2016) RP-2000 Mortality Table adjusted with Scale AA (January 1, 2015)



Dorothy F. Di Pesa, CPA
John F. Oteri, CPA

**INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN
ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS**

To the Board of the Norfolk County
Retirement System
Canton, Massachusetts

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Norfolk County Retirement System, as of and for the years ended December 31, 2018 and 2017, and the related notes to the financial statements, which collectively comprise the Norfolk County Retirement System's basic financial statements, and have issued our report thereon dated September 25, 2019.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Norfolk County Retirement System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Norfolk County Retirement System's internal control. Accordingly, we do not express an opinion on the effectiveness of the Norfolk County Retirement System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether Norfolk County Retirement System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

DI PESA & COMPANY

Di Pesa & Company

Certified Public Accountants
Quincy, Massachusetts

September 25, 2019